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ABSTRACT

This paper presents findings of a study that compared the school environment in Australian Catholic and government schools. A total of 208 teachers from 32 Queensland secondary schools completed the "Catholic School Environment Questionnaire." The sample included 80 teachers of religion at the Catholic nonorder (coeducational) and the Catholic order (same-sex) schools, and 128 science teachers at both types of Catholic schools and at Australian government schools. The 57-item instrument assessed the seven dimensions of mission consensus, empowerment, student support, affiliation, professional interest, resource adequacy, and work pressure. Catholic order (single-sex) and government coeducational schools had statistically significant differences on two scales: empowerment and mission consensus. Catholic nonorder and order schools had more positive environments than did government schools. Catholic girls' schools had more positive environments than did Catholic boys' schools. Teachers of religion perceived their school environments to have higher empowerment and resource adequacy compared to teachers of science. Finally, there was negligible difference between the school environments in coed and single-sex Catholic schools. Three figures and three tables are included. (Contains 51 references.) (LMI)

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TEACHER PERCEPTIONS OF SCHOOL ENVIRONMENT IN AUSTRALIAN CATHOLIC AND GOVERNMENT HIGH SCHOOLS

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Abstract: *This study of the school environment in Australian Catholic and Government schools involved the development and validation of a 57-item instrument to assess the seven dimensions of Mission Consensus, Empowerment, Student Support, Affiliation, Professional Interest, Resource Adequacy and Work Pressure. Comparisons of environment in Catholic non-order (coeducational), Catholic order (single-sex) and Government coeducational schools revealed statistically significant differences on two scales, namely, Empowerment and Mission Consensus. Catholic non-order and Catholic order schools had more positive environments than did Government schools. Catholic girls' schools had more positive environments than did Catholic boys' schools. Teachers of religion perceived their school environment to have higher Empowerment and Resource Adequacy compared to teachers of science.*

INTRODUCTION

The investigation of school-level psychosocial environment or climate has been a productive field of educational research since the early 1960s, especially in the United States (Anderson, 1982; Fraser, 1994; Fraser & Walberg, 1991; Thomas, 1976). Psychosocial environment refers to those aspects of the environment that have a social bearing either in origin or outcomes and it has been linked positively with student cognitive and affective outcomes.

This article presents the results of research which investigated the school environment in Australian Catholic and Government secondary schools. This research was distinctive for three reasons. First, the study employed an instrument suitable for assessing the school environment in Catholic secondary schools. Second, few previous studies have investigated school environment in Catholic and Government schools. Third, religion and science teachers' perceptions of the school environment were compared. Before the results of this research are presented, information is provided about the field of school environment, the importance of school environment to Catholic schools, teacher perceptual measures of school environment, and the design of the present study.

BACKGROUND

For many years, school environment has been acknowledged as an important and vital aspect of any school. Documents spanning 140 years of education in Australia allude to the central role of the environment in fostering student cognitive and affective growth. For example, Ely cited an Inspector's school report in 1858 in the colony of New South Wales which clearly alludes to school climate as an important element of the assessment of a school's success in relation to its mission:

> My impression of the school as a whole is not satisfactory considering the means at the teacher's disposal. The progress made is not adequate to the power employed. In respect to that subtle and indescribable feeling which pervades every school and is to it what personal character is to an individual which, defying analyses and definition, is yet distinctly perceived by a visitor and which is named the moral tone of the school: I feel still more disappointment. Instead of finding an earnest desire for knowledge which always characterises children attending a school in a healthy condition, I was impressed with the idea that the pupils were languid and apathetic. (Ely, 1971, p. 83)

The latest review of school curriculum in Queensland, *Shaping the Future* (Wiltshire, *et al.*, 1994), asserted that the effectiveness of the formal curriculum depends largely on what happens at the school and classroom levels. 'The quality of the total school environment, of teaching and learning processes, and of the relationship between teachers and individual students are all crucial factors in curriculum delivery' (p.192). Recent Australian documents (e.g., Australian Education Council, 1989; McGaw, *et al.*, 1993) emphasise the need for environments that promote affective and cognitive student growth. For example, two goals for Australian schools stated in the Australian Education Council's (1989) *Hobart Declaration on Schooling* are:

> . . . to enable all students to achieve high standards of learning and to develop self confidence, optimism, high self-esteem, respect for others, and the achievement of personal excellence
>
> . . . to develop knowledge, skills, attitudes and values which will enable students to participate as active and informed citizens in our democratic Australian society within an international context. (Australian Education Council, 1989, p. 1)

In his review of Goodlad's (1984) *A Place Called School*, Glatthorn (1984) suggests that *most satisfying* and *least satisfying* schools were distinguished by a subtle distinction in climate and usually involved relationships among teachers, students and parents. The fact that such relationships are manipulable reinforces the view that environments are dynamic and that environments can be modified.

Much effective schools literature has suggested that school-level factors partly account for student achievement (see e.g., Bossert, 1988; Purkey & Smith, 1985). For example, Bossert reported that schools which are successful (in terms of student achievement) have a school climate conducive to learning and a school-wide emphasis on basic skills instruction. There seems little doubt that positive school environments facilitate better student learning. That is, positive environments are a means to a valuable end. Clearly, there is no incompatibility between achieving positive environments and enhancing student cognitive and affective achievement. Moreover, positive school environments are educationally desirable ends in their own right.

CATHOLIC EDUCATION

Much Catholic church and school rhetoric suggests that Catholic schools possess distinctive learning environments. The original and continued official view of the Catholic church is that, in some way, religious faith permeates the whole of the curriculum (Leavey, 1993). This was implicit in the original foundation of the Australian schools last century, and has been restated in the four official papers on Catholic education since the Second Vatican Council (Vatican II) of 1962-1965. Church documents spanning 130 years indicate that the Catholic school was to have an atmosphere consistent with Church doctrines (Geoghegan, 1860; Provincial Synod, 1862), enlivened by the gospel spirit (Abbott, 1966) and dependent not so much on subject matter or methodology as on the people who work there (Sacred Congregation for Catholic Education, 1977). Bathersby, the present Archbishop of Brisbane, asserted:

> It would be a complete misunderstanding to see the Catholic school just as any other, with a daily religion lesson added. Important as the religion program is, it is only part of the difference. The whole atmosphere of the school is one of shared faith where parents, teachers and students come together in prayer and action to live the gospel of Jesus. For the young, the witnesses of faith-filled adults, teachers and parents, provide a lesson and encouragement that no text book can replace. (Bathersby, 1992, p. 2)

From the Catholic viewpoint, education is holistic with the religious dimension penetrating the entire school. Conceptually, the notion of having parcels of religion interspersed with parcels of secular knowledge has been rejected strongly. The rhetoric of the Catholic church and its schools supports the view that the Catholic school and its classrooms are permeated by a Catholic ethos which manifests itself in distinctive classroom environments. Praetz's (1974) study supported the proposition that Catholic school parents consider the moral tone in Catholic schools superior to that of Government schools. During the past 25 years, a limited amount of research has touched upon, but not investigated closely, the classroom environment of Australian Catholic secondary schools (Flynn, 1985, 1993; Leavey, 1972). These studies involved Catholic schools only, and accordingly it has been impossible to judge the classroom environment of Catholic schools compared to Government schools. The present study is important because it involved both Catholic and Government secondary schools.

CONCEPTUALISING AND RESEARCHING THE SCHOOL ENVIRONMENT

Historically, the most widely used conceptualisation of school environment has come from the field of educational administration where schools are viewed as formal organisations. As such, they are similar to most social groupings in that they have goals, rules, roles, a hierarchy of authority, reward systems, forms of compliance, coordination activities and communication patterns (Thomas, 1976). The pioneering work which led to Halpin and Croft's (1963) *Organizational Climate Description Questionnaire* (OCDQ) and Stern's (1970) *College Climate Index* (CCI) relied heavily on previous work in business organisations (Fraser, 1986).

One particularly useful conceptualisation of school environment is in terms of the school's organisational climate and psychosocial characteristics (Moos, 1974). Within this approach, schools are understood solely in terms of the perceptions of their inhabitants in a framework of person/milieu interaction (Fraser & Rentoul, 1982). It reflects the view that the perceptions of the inhabitants are the raw materials in the measurement of environment, and contrasts with the use of direct observation techniques which report researchers' perspectives. If we accept that inhabitants act on perceptions, then these perceptions assume great importance. Defined in this way, school environment emphasises the interactions of the various school personnel and is a set of factors 'which gives each school a personality, a spirit, a culture' (Tye, 1974, p. 20). Historically, this idea has its roots in Lewin's (1936) field theory which defined behaviour as a function of the person and the psychological environment as it exists for that individual.

Traditionally, school environment has been assessed through the perceptions of the teachers or a sample of teachers of the school staff, primarily because they can comment on staff-related issues of which students might not be aware. Nevertheless, the use of student perceptions needs to be explored because their perceptions will add valuable insights to the data base.

There is a generally accepted view that a good school environment enhances student outcomes. This view is supported by research which suggests that school environment influences student cognitive outcomes (Brookover, *et al.*, 1978; Ellett & Walberg, 1979), student values (Vyskocil & Goens, 1979) and student personal growth and satisfaction (Bailey, 1979). In Australia, extensive research in Catholic schools led Flynn (1985) to conclude that the most effective Catholic schools are characterised, not by their physical resources, buildings or playing fields, but by their outstanding social climates which give them a Catholic ethos or spirit. In the United States, Erickson (1981) concluded that the most effective schools of any type are distinguished, not by elaborate facilities, extensively trained teachers, small classes, or high levels of financial support, but by outstanding social climates. These findings are remarkably similar to those of Rutter, *et al.*, (1979) whose study of London schools concluded that school processes collectively produce a unique spirit or ethos.

Other studies have investigated school environment dimensions as criterion variables. For example, rapport between staff and administration was found to be positively related to school environment in studies conducted by the New York State Department (1976) and Ellett and Walberg (1979). Some recent school environment studies have compared the school environment perceptions of first-year teachers and their experienced support teachers (Huang, *et al.*, 1993), investigated the relationship between school environment and teacher burnout in Singaporean schools (Ball, *et al.*, 1995), and conceptualised the study of school professional learning environments (Claudet & Ellett, 1994). When school environment instruments were used in examining differences between different types of schools, primary schools were perceived as having more favourable school environments than secondary schools (Docker, *et al.*, 1989; Fisher & Fraser, 1991). Another line of research has investigated links between school-level environment and classroom-level environment (Dorman, 1995; Fisher, *et al.*, 1993; Fisher, *et al.*, 1995; Idiris & Fraser, 1994). For example, Idiris and Fraser used a sample of 64 science teachers in 20 Nigerian schools to show that greater emphasis on the school environment dimensions of Affiliation, Professional Interest, Participatory Decision-Making, Innovativeness and Resource Adequacy is likely to lead to more positive classroom environments in terms of Negotiation, Autonomy and Investigation.

THE PRESENT STUDY

Research Questions

Three research questions were identified for the present study. First, to what extent do the school-level environments in different types of Queensland secondary schools differ? Second, to what extent do the school-level environments in Catholic girls' and Catholic boys' schools differ? Third, to what extent do the teachers of religious education and science in Catholic schools differ in their perceptions of the school environment?

Sample

The sample consisted of 208 teachers from 32 Queensland secondary schools. As shown in Table 1, these schools were grouped as Catholic non-order (coeducational), Catholic order (single-sex) and Government (coeducational). Catholic non-order schools are lay administered through a Catholic Education Office. By contrast, Catholic order schools are administered by a Catholic religious teaching order. To facilitate the answering of the research questions stated above, teachers also were identified according to their specialist teaching subject. The sample of schools was from metropolitan Brisbane and provincial cities and towns of Queensland. Care was taken to ensure that the sample was representative of the Queensland population of the three types of schools.

TABLE 1. DESCRIPTION OF TEACHER SAMPLE BY SCHOOL TYPE, TEACHING SUBJECT AND GENDER

Subject	Sample size							
	Catholic non-order (coed)		Catholic order (single-sex)		Government (coed)		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
Religion	20	20	19	21	-	-	39	41
Science	22	18	20	20	27	21	69	59
Total	42	38	39	41	27	21	108	100

Development and Validation of School Environment Instrument

The instrument used to assess school environment in this study was the *Catholic School Environment Questionnaire (CSEQ)*, which has several noteworthy characteristics. First, it is designed to be answered by teachers in Catholic schools. Second, teachers respond to each item using a five-point Likert scale (viz., Strongly Agree, Agree, Neither/ Not Sure, Disagree, Strongly Disagree). Third, the instrument has 57 items which are assigned to seven underlying scales, namely: Empowerment, Student Support, Affiliation, Professional Interest, Mission Consensus, Resource Adequacy and Work Pressure. Descriptions of these scales are given in Table 2. It should be noted that some of these scales are modifications of existing scales of the *School-Level Environment Questionnaire* (Fraser, 1994; Fraser & Rentoul, 1982). Finally, in accordance with established standards of instrument development (see e.g., Anderson, 1982), both positively and negatively worded items appear in the questionnaire.

Table 2. Description of the Seven Scales of the Catholic School Environment Questionnaire

Scale Name	Scale Description	Items per Scale	Sample Items
Empowerment	The extent to which teachers are empowered and encouraged to be involved in decision making processes	10	Teachers feel that they are authorised to make decisions in this school.(+)
Student Support	The extent to which there is good rapport between teachers and students and students behave in a responsible manner	7	Most students are helpful and cooperative to teachers.(+) Very strict discipline is needed to control many of the students.(-)
Affiliation	The extent to which teachers can obtain assistance, advice and encouragement and are made to feel accepted by colleagues.	7	I feel accepted by other teachers.(+) My colleagues seldom take notice of my professional views and opinions.(-)
Professional Interest	The extent to which teachers discuss professional matters, show interest in their work and seek further professional development.	7	Teachers frequently discuss teaching methods and strategies with each other.(+) Staff meetings are dominated by routine administrative matters rather than teaching and learning issues.(-)
Mission Consensus	The extent to which consensus exists within the staff with regard to the overarching goals of the school.	10	Teachers regularly refer to the mission of the school when addressing school issues.(+) Some teachers in this school could try harder at supporting the goals of the school.(-)
Resource Adequacy	The extent to which support personnel, facilities, finance, equipment and resources are suitable and adequate.	9	Class sets of important resource are available when needed. (+) Facilities are inadequate for catering for a variety of class-room activities and learning groups of different sizes.(-)
Work Pressure	The extent to which work pressure dominates the school	7	There is no time for teachers to relax.(+) Teachers don't have to work very hard in this school.(-)

Items marked (+) are scored positively. Items marked (-) are scored negatively.

The *CSEQ's* development was based on stakeholder perceptions of contemporary schools, a review of Catholic education literature and an examination of salient dimensions of existing instruments. Although the *CSEQ* was developed specifically for Australian Catholic schools, it also was

considered appropriate for use in Government schools. That is, all *CSEQ* items were checked for their relevance to any contemporary secondary school.

In order to investigate the structural characteristics of the *CSEQ*, internal consistency and discriminant validity data were generated (see Table 3). Estimates of the internal consistency of the seven scales were calculated using Cronbach's alpha coefficient. As the school mean was the unit of analysis in testing hypotheses, it was considered important to report internal consistency for school means in addition to individual teachers (Sirotnik, 1980). As shown in Table 3, each scale of the school environment instrument has acceptable internal consistency for either the individual teacher or the school mean as the unit of analysis. As expected, reliabilities generally are larger for the analysis involving the school means than for the analysis involving individuals. The discriminant validity data in Table 3 use the mean correlation of a scale with the other six scales as a convenient index. The values suggest that the scales do overlap but not to an extent that would confound interpretation of subsequent results.

TABLE 3. INTERNAL CONSISTENCY (ALPHA RELIABILITY), DISCRIMINANT VALIDITY (MEAN CORRELATION WITH OTHER SIX SCALES) AND ANOVA RESULTS FOR THE CSEQ (N = 208 TEACHERS; 32 SCHOOL MEANS)

Scale	Alpha Reliability		Mean Correlation with Other Scales		ANOVA Results	
	Teacher	School mean	Teacher	School mean	*F*	*Eta*^{2}
Empowerment	0.88	0.94	0.34	0.41	2.6*	0.31
Student Support	0.83	0.89	0.28	0.37	2.2*	0.28
Affiliation	0.84	0.81	0.32	0.27	1.9*	0.25
Professional Interest	0.80	0.85	0.37	0.43	2.4*	0.29
Mission Consensus	0.84	0.91	0.38	0.45	3.3*	0.37
Resource Adequacy	0.76	0.82	0.20	0.28	1.9*	0.25
Work Pressure	0.80	0.86	0.08	0.13	1.3	0.18

*$p < 0.001$

In order to establish whether the school environment instrument could differentiate between schools, a one-way ANOVA, with the teacher as the unit of analysis and school membership as the main effect, was performed for each scale. The results shown in Table 3 indicate that six of the seven scales differentiated significantly between schools ($p<.001$). The exception was the Work Pressure scale. (One possible explanation for this result is that work pressure shows little variation across settings and is perceived to be high in all schools. The *eta* statistic, which is a ratio of between to total sums of squares (Cohen & Cohen, 1975) and indicates the proportion of variance explained by school membership, ranged from 18% for the Work Pressure scale to 37% for the Mission Consensus scale.

RESULTS

Differences in the School Environment of Catholic and Government Schools

Teacher data were used to form 32 school means for each of the seven *CSEQ* scales. Using the school mean as the unit of analysis and school type (viz., Catholic non-order, Catholic order, and Government) as the grouping variable, a multivariate analysis of variance (MANOVA) was performed on the data to test for an overall relationship between school type and the set of seven school environment scales. Because the multivariate test was significant ($p<0.001$) using Wilks' lambda criterion, univariate F tests for each scale were interpreted.

These tests showed that the three school types differed significantly ($p<0.05$) on the two scales of Empowerment [$F(2,29) = 3.37$ ($p<0.05$)] and Mission Consensus [$F(2,29) = 5.95$ ($p<0.05$)]. Tukey's *post hoc* procedure indicated that, for both of these scales, the differences were between Catholic non-order and Government schools, and between Catholic order and Government schools. For the Empowerment scale, effect sizes (i.e., differences in group means expressed in terms of standard deviation units) were 1.11 for the comparison of Catholic non-order and Government schools and 0.81 for the comparison of Catholic order and Government schools. For the Mission Consensus scale, the effect sizes for comparisons of both types of Catholic schools with Government schools were 1.33. These effect sizes are large enough to be educationally important.

Sample scale means for each type of school are graphed in Figure 1 and indicate that Catholic school teachers perceived their environment to be more empowering and higher on consensus of mission than do teachers in Government schools. Two noteworthy features are the small variation between all three school types on the Affiliation and Professional Interest scales, and the closeness of the mean scores for the two types of Catholic schools on all seven scales.

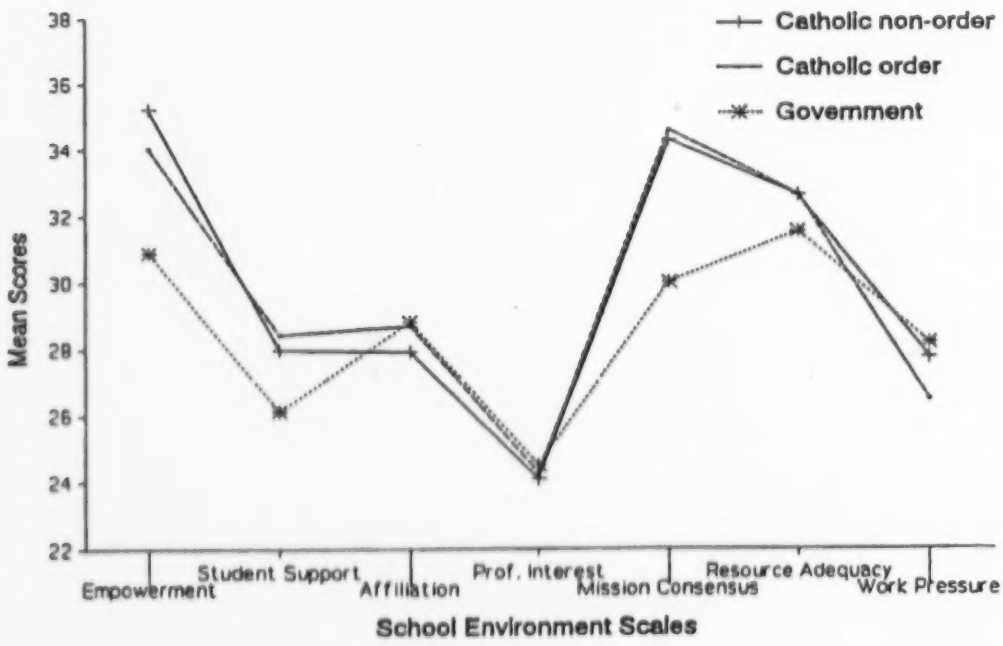

Figure 1 Mean scores for Catholic non-order, Catholic order and Government schools for seven school enviroment scales (N=32 school means)

An inspection of the data set used in the previous analysis indicated that, to some degree, the data from girls' schools appeared to counter-balance data from boys' schools. It was thought that the pooling of data from the five girls' schools and the five boys' schools could have masked some differences. To investigate this issue, school means based on the scale scores of the 80 teachers in the 10 Catholic order schools were used to compare the school environments in the five girls' schools with the environment of the five boys' schools. Because of the small sample size (10 school means for each school environment scale), the non-parametric MannWhitney test was used. The overall significance level was set at 0.05, and the Bonferroni Inequality (Stevens, 1992) was employed because seven separate analyses were conducted. The conservative application of this inequality requires the planned Type I error for each analysis to be set at the family-wise level divided by the number of analyses (i-e- 0.05 @ 7 – 0.007).

None of the seven Mann-Whitney tests were significant at this level. However, an inspection of the sample means for each school environment scale revealed a consistent pattern for four of the scales (see Figure 2). Teachers in girls' schools perceived somewhat greater Empowerment, Student Support, Professional Interest and Mission Consensus in their schools than did teachers in boys' schools.

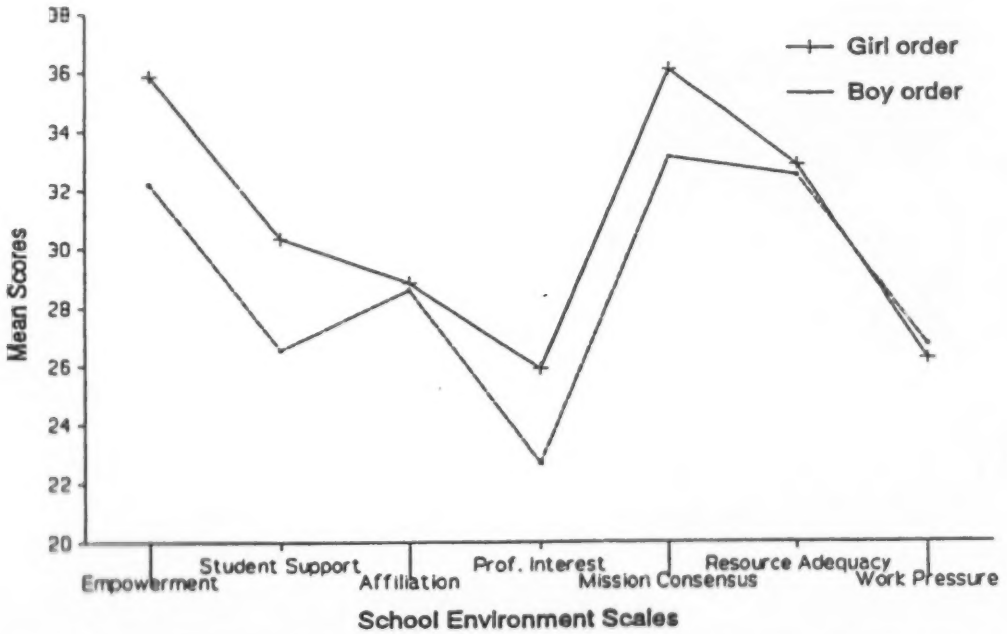

Figure 2 Mean scores for Catholic order schools for seven school environment scales (N=10 school means)

One cautionary note concerning these findings concerns the possible impact of gender imbalance in the sample. That is, it has been often assumed that females perceive environments more favourably than males and that this explains the differences between the perceived environment in boys' and girls' schools rather than the type of school. Two aspects of the present study diminish these concerns. First, there was a considerable degree of gender balance in the sample in that, of the 40 Catholic girls' school teachers, 23 were female. The Catholic boys' school sample consisted of 22 male and 18 female teachers.

Second, school-type gender means show an underlying pattern irrespective of teacher gender (see Table 4). Table 4 shows female and male teacher means for the sample of Catholic boys' and Catholic girls' schools. Clearly, these results suggest that female teachers in Catholic girls' schools perceived their environment more positively than female teachers in Catholic boys' schools. Similar results were found for comparisons of male teachers in girls' schools and male teachers in boys' schools.

Overall, it appears that the girls' schools had a more positive environment than boys' schools, irrespective of whether female or male teacher perceptions were used to assess the environment. Because of the small sample size, a degree of caution needs to be exercised in accepting these results and further studies using larger sample sizes are needed.

Table 4: Gender Means for Teachers in Catholic Girls' and Catholic Boys' Schools for Seven School Environment Scales (N = 80 teachers)

School Environment	Teacher Gender	Gender Mean for Girls' Schools	Gender Mean for Boys' Schools
Empowerment	Female	36.03	30.51
	Male	35.42	33.11
Student Support	Female	30.31	26.71
	Male	30.37	26.47
Affiliation	Female	29.15	28.63
	Male	28.92	27.92
Professional Interest	Female	26.15	23.02
	Male	24.92	22.46
Mission Consensus	Female	36.14	32.42
	Male	34.97	33.46
Resource Adequacy	Female	32.14	31.92
	Male	35.32	32.77
Work Pressure	Female	25.21	27.64
	Male	28.05	26.33

Differences Between the School Environment Perceptions of Religious Education and Science Teachers

Of the 208 teachers involved in this study, 160 taught in Catholic secondary schools. Because these teachers identified themselves as teacher of religious education or science, it was possible to investigate whether teachers of these subjects perceived the school environment differently. The teacher scores were used to calculate a school subject mean for each scale. A repeated measures MANOVA with subject (science vs. religious education) as the within-subjects effect revealed a significant overall effect ($p<0.05$). Therefore, univariate F tests were interpreted to reveal significant differences between the environment perceptions of religion and science teachers on two scales, namely, Empowerment and Resource Adequacy ($p<0.05$). Religion teachers perceived greater levels of Empowerment and Resource Adequacy than teachers of science. For the remaining five scales, only small differences existed between the perceptions of religion and science teachers (see Figure 3).

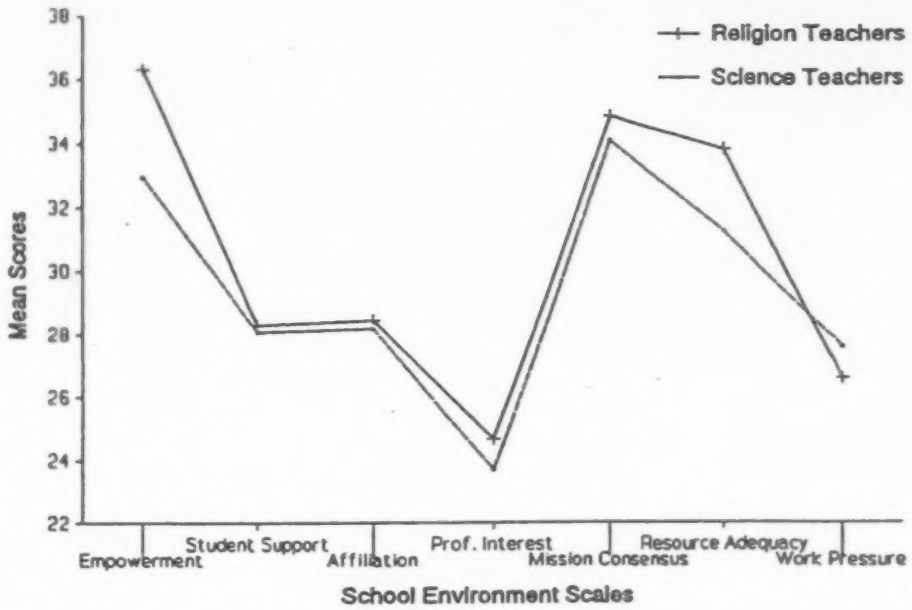

Figure 3 Mean scores for teachers of religion and science classes for seven school environment scales (N = 20 pairs of school subject means)

Discussion and Conclusion

This article has reported research on school environment in Australian Catholic and Government secondary schools. As part of this research, a 57-item instrument called the *Catholic School Environment Questionnaire* (CSEQ) was developed to assess teacher perceptions of seven dimensions of school environment, namely, Empowerment, Student Support, Affiliation, Professional Interest, Mission Consensus, Resource Adequacy, and Work Pressure. Each of these scales exhibited satisfactory internal consistency reliability and discriminant validity and differentiated between schools. The development and use of this instrument was important because the rhetoric of Catholic church and school documents suggests that Catholic schools are intended to have distinctive environments which could not be assessed fully by existing instruments.

If Catholic schools have a different (and more positive) environment when compared to Government schools, it is reasonable to expect the school environment scores for Catholic schools to be higher than Government schools. The evidence of this study provides only partial support for this view. The result for the Mission Consensus scale supports strongly the view that a more unifying ethos exists in Catholic schools compared to Government schools. Also, teachers in Catholic schools perceived greater Empowerment by their school administration teams. This result supports earlier Australian research by McTaggart (1980) which concluded that teachers had greater autonomy in Catholic schools compared to Government schools.

In addition to these positive results, Catholic school teachers reported higher Student Support and Resource Adequacy than did Government school teachers. The latter result appears to contradict the popular belief that Catholic schools are under-resourced compared to Government schools. Despite a number of clear handicaps (e.g., longer working day, more classroom contact, fewer support staff), Work Pressure in Catholic schools was perceived to be lower than in Government schools. It could well be that Catholic school teachers have accepted the norms of resourcing and working conditions in their schools. That is, they might have a more accommodating frame of reference. Nevertheless,

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they perceived their school environment to have less pressure than their Government school counterparts.

Results for the assessment of teacher-teacher Affiliation showed Government schools to be on a par with Catholic schools. A similar result holds for teacher Professional Interest. Overall, the results suggest that Catholic schools, while showing a clear superiority in the consensus of mission and empowerment of staff, need to improve in the two dimensions of teacher-teacher Affiliation and teacher Professional Interest. The low score for all school types on Professional Interest is cause for concern for Queensland secondary education in general.

The second important result is the negligible difference between the school environment in Catholic non-order (coeducational) and Catholic order (single-sex) schools. Single-sex schools are regarded as more prestigious and traditional because they are old and administered by a religious order compared to coeducational schools. In fact, many coeducational Catholic secondary schools were created through the amalgamation of boys' and girls' schools. Folklore suggests that singlesex schools have a distinctive (and superior) environment compared to Catholic coeducational schools. The argument is that single-sex schools are permeated by the particular order's charism (i.e., special characteristics). That is, the environment of order schools should reflect a particular form of the Catholic ethos more clearly than non-order schools.

The evidence from this study does not support the view that order and non-order schools have different environments. Analyses revealed no statistically significant differences between scale scores for order and non-order schools. The presence of a religious order (or that the school is single-sex) does not appear to be associated with a distinctive environment. This result confirms American research involving Catholic high schools with high and low proportions of lay teachers which found negligible differences on six school environment dimensions: Discipline Policy, Order, Academic Orientation, Degree of Structure, Morale and Sense of Community (National Catholic Educational Association, 1985). Earlier research in Great Britain concluded that, compared to coeducational schools, single-sex schools were more concerned with discipline and control (Dale, 1974). Flynn's (1993) recent research in New South Wales involving single-sex and coeducational Catholic schools found that coeducational schools had significantly better student morale, relationships with teachers, attitudes to discipline and attitudes to the school principal. Catholic school literature has not ventured a position on the order school versus non-order school issue. In a pragmatic fashion, Catholic education administrators have amalgamated order schools where necessary to form coeducational non-order schools. These decisions have been based on financial rather than educational grounds.

The third comparison reported in this article revealed that teachers of religion perceived greater Empowerment and Resource Adequacy than science teachers. These results are plausible because the formal religion curriculum is less structured than the science curriculum, and therefore it is possible for teachers of religion to have greater flexibility in the classroom. Most subjects of the formal curriculum are "assessment driven" in that summative assessment dictates what activities are undertaken in the classroom. Religion lessons provide a refreshing departure from these restrictions. Accordingly, teachers can negotiate a curriculum with their students and make meaningful decisions. However, it should be noted that present moves to implement a strict formal curriculum in religious education probably would bring religion more in line with other subjects. The higher Resource Adequacy of religion teachers compared to science teachers is consistent with the increased resourcing of religious education in Catholic schools over the past decade.

This article attempts to stimulate further research by reporting school environment research in Australian secondary schools. Further studies could build upon and extend recent research investigating associations between school and classroom environment (Dorman, 1995; Fisher, *et*

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al., 1995) and the use of school environment assessments in teacher professional development programs (Fisher & Fraser, 1991). Because prior research has established links between school environment and student outcomes, the rising emphasis on outcomes in Australian schools should develop further interest among administrators and teachers in the investigation of their school's psychosocial environment.

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